Remarks

Applicant respectfully requests reconsideration. In response to the Office Action, Applicant has amended claims 1, 17, 18, and 19. Claim 20 has been added. No claims have been canceled.

As a preliminary matter, Applicant has identified and corrected grammatical errors in the specification at paragraphs 26 and 32. These changes are noted in the marked up section below. No new matter has been added.

The Examiner has rejected claim 1 under 35 U.S.C. §102 (b) as being anticipated by Baker et al. (US Patent No. 6,266,700, hereinafter, "Baker"). Baker discloses a network filtering system that is asserted to be reconfigurable for handling different network protocols. Reconfigurability is managed in part through the use of protocol description files 22, which specify a protocol control record (Table 1) and field sub-records (Tables 2-11) related to the network protocol.

Notably, the protocol control record and field sub records are defined with a great deal of specificity. For instance, each of tables 1-11 provides a detailed listing of specific offsets, names, and descriptions of information to be supplied for adapting the record and sub-records to a particular target protocol. Different values can be "plugged in" to the tables to adapt the system to different protocols; however, the overall structure of the interface (e.g., the particular offsets, names, and descriptions) is fixed.

In contrast with Baker, claim 1 as amended is directed to a method of communicating over different target media and includes a step of

> providing, for each of the plurality of different target media, a plurality of communication element types, each communication element type being a user-definable data structure that pertains to a particular protocol layer of the respective target medium,
>
> wherein at least one of the plurality of communication element types is included by reference in greater than one other of the plurality of communication element types.

Support for this claim language can be found in the specification at paragraphs 22, 31, 46, and 47. See particularly paragraph 22:

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The generic communication construct according to the invention departs from bus-specific constructs of the prior art by allowing users to define communication element types of their own choosing. The communication element types represent different layers of the bus model. These communication element types include, for example, message types, word types, and field types. Other communication element types can be created as well to represent other layers of the bus model. Users can define these communication element types for existing busses or for future busses.

See also paragraph 31:

Field types, word types, and message types essentially form distinct structures that can be combined to build up higher level structures. For instance, the same field types can be used in different combinations to build different word types, and the same word types can be used in different combinations to build different message types. Even message types can be combined to form higher level constructs (e.g., transactions such as 1553 command-response transactions).

Baker does not disclose anything that resembles a communication element type as recited in claim 1 as amended. Although Baker's protocol description record (Table 1) appears to represent certain aspects of a protocol, it is not a user definable data structure. It is a fixed structure requiring specific information to be plugged in at specific locations.

Claim 1 as amended requires that the communication element types be user-definable. For example, users can define the message types, word types, and field types applicable to any desired protocol. In Baker, however, users may only plug values into a fixed table. Users of Baker's system do not define the structure of the tables themselves. Although Baker appears to afford users some degree of flexibility in adapting to different protocols, that flexibility applies only where the protocol conforms to the structure of the table. The invention defined in claim 1 as amended is not limited in this fashion.

In addition, Baker does not disclose an arrangement in which "at least one of the plurality of communication element types is included by reference in greater than one other of the plurality of communication element types[,]" as recited in claim 1 as amended. Although some of the tables expand upon information provided in other tables (e.g., Table 2 is an expansion of bytes 28-31 of Table 1), none of the tables 1-11 in Baker are referenced by more than one of the other tables.

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In light of these differences, it is apparent that Baker does not anticipate claim 1 as amended and that the rejection of claim 1 under 35 U.S.C. § 102(b) should be withdrawn. Since claim 1 has not been rejected under any other grounds, Applicant respectfully submits that claim 1 as amended is allowable.

Claims 2-16 depend from claim 1 as amended and are allowable for the same reasons.

Applicant has added a new claim 20. The specification provides support for claim 20 at paragraph 31. Claim 20 depends from claim 1 and is allowable for the same reasons.

The Examiner has rejected claim 17 under 35 U.S.C. §102(b) as being anticipated by Baker. Applicant has amended claim 17. Claim 17 as amended is directed to a method of structuring communications over a communications medium. It includes, *inter alia*, the steps of

> creating an instance of [...] at least one user-definable communication element type; and

> varying at least one characteristic of the instance to determine a susceptibility of equipment operatively connected to the target medium to the varied characteristic.

Support for these steps can be found in the specification, particularly at paragraphs 43 and 49:

> Users specify these types and can create instances of them to be used and manipulated in the context of a program. For example, computer software can be used to create an instance of MyMessage. The program can then manipulate the instance of MyMessage by establishing its settings, specifying its data, etc. The manipulated instance of MyMessage can then be transmitted or received for conducting the specific transfers defined by its words and fields. [See ¶43]

> [...] many opportunities arise for improving the quality of testing. For instance, users have broad abilities to perform fault injection in testing bus devices. Users can define field types, word types, and message types in ways that deliberately violate the protocol or specification of a bus. For testing purposes, a field can be defined as having too many bits or too few bits. A word can be defined as having

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too many fields or too few fields, or by having fields in the wrong locations within the word. Given the flexible, user-defined structure of messages, words, and fields, there are enormous possibilities for deviating from a bus protocol, in a controlled manner, to observe a device's response. [See ¶49]

Baker does not disclose a method or process that includes the steps recited in claim 17 as amended. Therefore, the rejection of claim 17 as amended under 35 U.S.C. § 102(b) should be withdrawn. Since claim 17 as amended has not been rejected on any other grounds, Applicant respectfully submits that claim 17 as amended is allowable.

Claim 18 has also been amended. Claim 18 as amended depends from claim 17 as amended and is believed to be allowable for the same reasons.

The Examiner has rejected claim 19 under 35 U.S.C. §102(b) as being anticipated by Baker. Applicant has amended claim 19. Claim 19 as amended is directed to a method for creating an interface with a communication medium. The method includes the steps of:

> creating a plurality of user-definable communication element types for representing different layers of a generalized communication model, wherein at least one of the plurality of communication element types is included by reference in greater than one other of the plurality of communication element types;

> saving the at least one user-definable communication element type in a computer readable format that can be accessed for communicating over the medium; and

> instantiating one or more of the plurality of communication element types to create specific instances of communications over the communication medium.

Claim 19 as amended distinguishes over Baker. For instance, Baker does not disclose communication element types wherein "at least one of the plurality of communication element types is included by reference in greater than one other of the plurality of communication element types[,]" as recited in claim 19 as amended. As described above in connection with claim 1 as amended, none of Baker's tables is referenced by more than one other table.

Furthermore, Baker's tables are not the same as the "communication element types" recited in claim 19 as amended. They are not user-definable types. In addition, Baker does not perform a step of "instantiating one or more of the plurality of

communication element types to create specific instances of communications over the communication medium." Baker's tables are not types to be instantiated, but rather data records to be filled in.

In light of these differences, Baker does not anticipate claim 19 as amended, and the rejection of claim 19 under 35 U.S.C. § 102(b) should be withdrawn.

Conclusion:

Applicant contends that the application is now in condition for allowance. A notice to that effect is earnestly solicited.

Respectfully Submitted,

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